

INSTRUCTIONS

For Field Assembly and Installation

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INTRODUCTION

CAUTION

The equipment covered by this publication must be selected for a specific application and it must be installed, operated, and maintained by qualified persons who are thoroughly trained and who understand any hazards that may be involved. This publication is written only for such qualified persons and is not intended to be a substitute for adequate training and experience in safety procedures for this type of equipment.

These instructions are for field assembly and installation of the S&C Bypass Accessory for Series 2000 Circuit-Switchers Model 2030—With Vertical Interrupt-

ers and Without Disconnect, in ratings of 69 kv through 138 kv. This accessory permits the interrupters to be opened and closed for inspection of Circuit-Switcher—and checkout of relaying equipment—without opening the high-voltage circuit. See Figure 1.

The S&C Bypass Accessory consists of a set of three single-pole, stick-operated devices rated 900 amperes continuous, 40,000 amperes momentary. When furnished as original equipment with the Circuit-Switcher, inclusion of the accessory is designated by the addition of the suffix “-F1” to the Circuit-Switcher catalog number.

Install the bypass accessory only after the Circuit-Switcher has been completely installed.



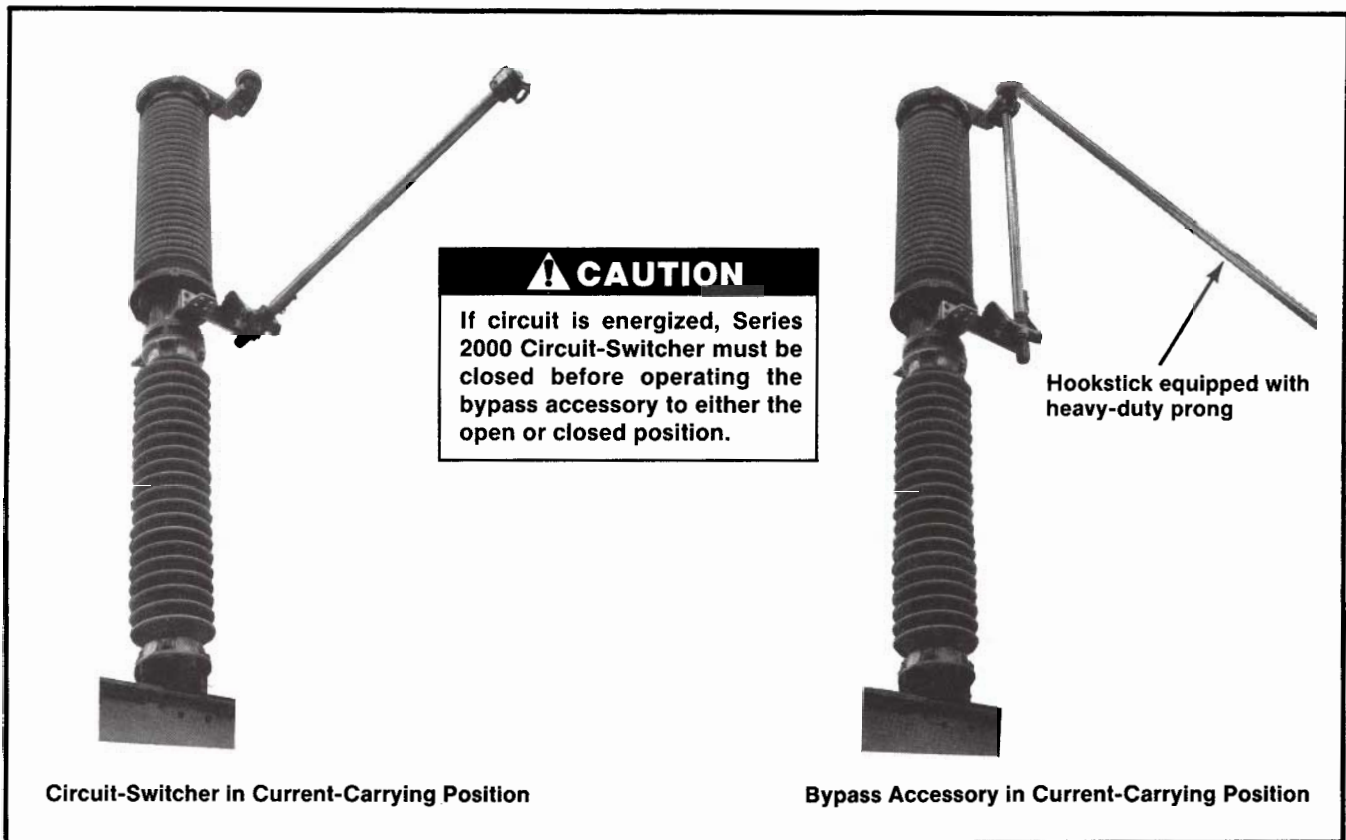
INTRODUCTION — Continued

Figure 1. Bypass accessory for Series 2000 Circuit-Switcher Model 2030.

INSTALLATION AND ALIGNMENT**CAUTION**

Normal system practices must be followed to ensure that the Circuit-Switcher is de-energized, isolated from high-voltage sources, and grounded at all six terminals before proceeding with the work described below.

Step 1

For shipping purposes, the hinge mounting plate on each bypass accessory blade-and-hinge assembly is bolted to an "L"-shaped auxiliary terminal pad (which, incidentally, will provide an alternate means for making the high-voltage connection at the Circuit-Switcher transition box). Loosen the two $\frac{1}{2}$ "— $13 \times 1\frac{1}{2}$ " hex-head stainless-steel cap screws, Belleville washers, flat washers, and nuts which attach the hinge mounting plate to the auxiliary terminal pad on each blade-and-hinge assembly. Discard the flat washers and nuts

but retain the cap screws and Belleville washers for re-use in Step 2. Be careful not to contaminate the aluminum connector compound on the mating surfaces of the hinge mounting plate and the auxiliary terminal pad.

Step 2

Attach each bypass accessory blade-and-hinge assembly to its respective Circuit-Switcher transition box as follows. See Figure 2.

- (a) Thoroughly wire-brush the raised surface on the back of the transition box and the mating surface on the auxiliary terminal pad, and immediately apply a liberal coating of Penetrox® A (available from Burndy Corporation) or other suitable aluminum connector compound to the brushed surfaces.
- (b) *Loosely* attach the auxiliary terminal pad and the hinge mounting plate to the transition box using

INSTALLATION AND ALIGNMENT — Continued

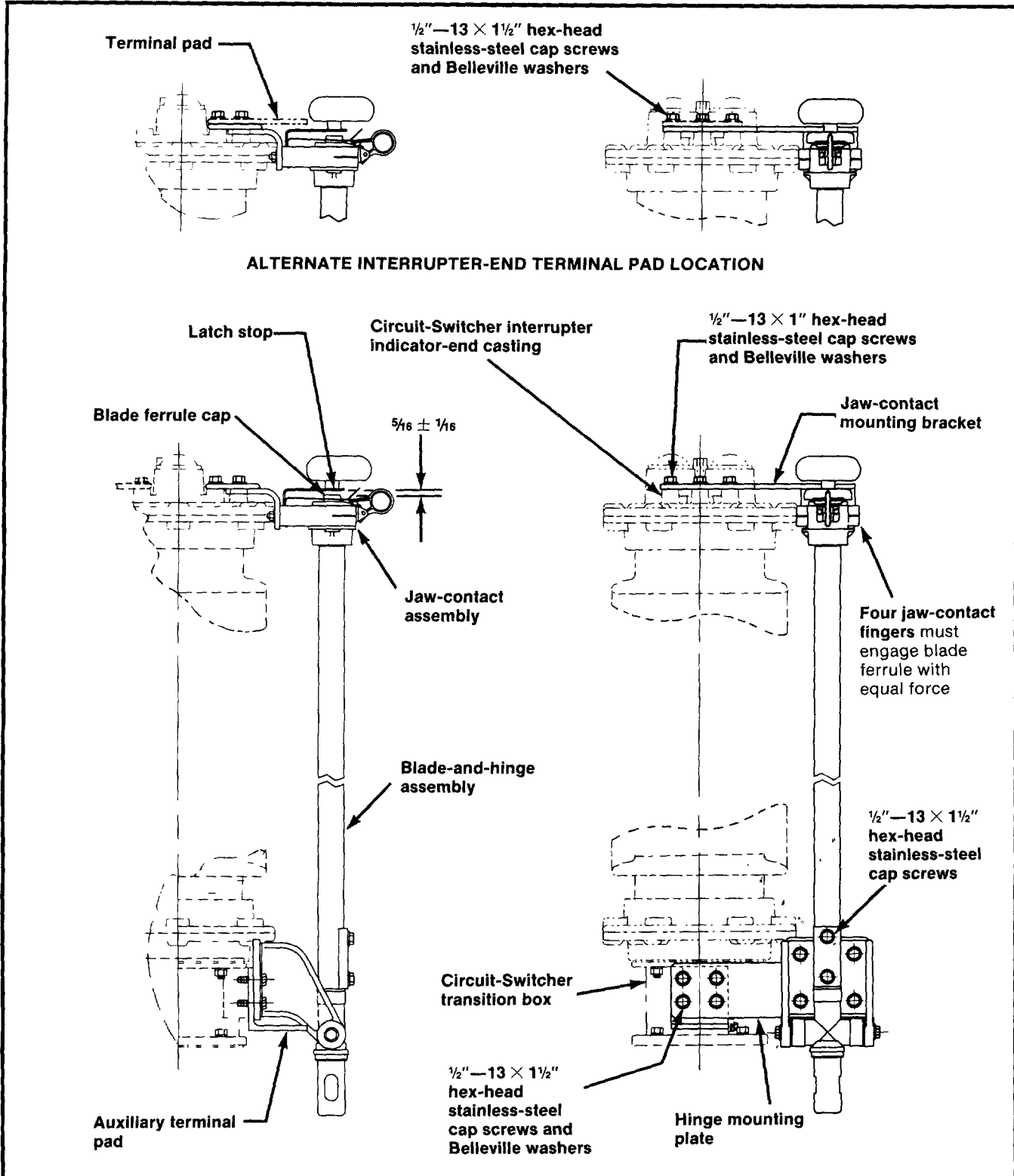


Figure 2. Installing and aligning bypass accessory for Series 2000 Circuit-Switcher Model 2030.



INSTALLATION AND ALIGNMENT — Continued

the two $\frac{1}{2}$ "— $13 \times 1\frac{1}{2}$ " hex-head stainless-steel cap screws and Belleville washers retained from Step 1, plus two additional cap screws and Belleville washers furnished. (The auxiliary terminal pad must be attached as shown even if the high-voltage connection at the transition box will be made to the cast-in terminal pad.)

Step 3

Attach each bypass accessory jaw-contact assembly to its respective Circuit-Switcher interrupter indicator-end casting as follows. See Figure 2.

- (a) Thoroughly wire-brush the indicator-end casting where the jaw-contact mounting bracket is to be attached, as well as the mating surface on the mounting bracket, and immediately apply a liberal coating of Penetrox A or other suitable aluminum connector compound to the brushed surfaces.
- (b) Securely attach the jaw-contact mounting bracket to the indicator-end casting using three $\frac{1}{2}$ "— 13×1 " hex-head stainless-steel cap screws and Belleville washers furnished *or, if the interrupter-end terminal pad is to be attached at its alternate location*, securely attach the terminal pad and the jaw-contact mounting bracket to the indicator-end casting using three $\frac{1}{2}$ "— $13 \times 1\frac{1}{2}$ " hex-head stainless-steel cap screws and Belleville washers furnished.

Step 4

Align each bypass accessory blade-and-hinge assembly with its associated jaw-contact assembly as follows. See Figure 2.

- (a) Slowly close the blade assembly into the jaw-contact assembly. Check that the blade makes an

"on center" approach and that the four jaw-contact fingers engage the blade ferrule with equal force. If adjustment is necessary, loosen the four $\frac{1}{2}$ "— $13 \times 1\frac{1}{2}$ " hex-head stainless-steel cap screws which attach the auxiliary terminal pad and hinge mounting plate to the Circuit-Switcher transition box and, using the blade assembly as a lever, bring the blade-and-hinge assembly into proper alignment.

- (b) Slowly open the blade assembly. Verify that when the blade has just disengaged the jaw-contact fingers, the centerline of the blade assembly has not shifted left or right by more than $\frac{1}{8}$ inch. If adjustment is necessary, again loosen the four $\frac{1}{2}$ "— $13 \times 1\frac{1}{2}$ " hex-head stainless-steel cap screws and, using the blade assembly as a lever, bring the blade-and-hinge assembly into proper alignment.
- (c) Securely tighten the four $\frac{1}{2}$ "— $13 \times 1\frac{1}{2}$ " hex-head stainless-steel cap screws.

Step 5

Check, on each bypass accessory, that the blade ferrule properly engages the latch on its associated jaw-contact assembly as follows. See Figure 2.

- (a) Accurately measure the gap between the top of the blade ferrule cap and the bottom of the latch stop.
- (b) If the dimension is not within the tolerance specified, loosen the two $\frac{1}{2}$ "— $13 \times 1\frac{1}{2}$ " hex-head stainless-steel cap screws at the bottom of the blade assembly and raise or lower the blade assembly as required. Then securely tighten the cap screws.

OPERATION**⚠ CAUTION**

If circuit is energized, Series 2000 Circuit-Switcher must be closed before operating the bypass accessory to either the open or closed position.

The bypass accessory blade assembly is to be opened by a downward pull on the pull ring, using a conventional hookstick equipped with a heavy-duty prong,

such as the S&C Station Prong, Catalog Number 4402R2. The blade assembly should be eased down, not permitted to drop freely.

The bypass accessory blade assembly is also to be closed using a conventional hookstick equipped with a heavy-duty prong. Engage the pull ring with the prong and swing the blade assembly to within two or three inches of the jaw-contact assembly. Then move the blade assembly sharply to the closed position.

INSPECTION SCHEDULE AND PROCEDURES

To assure continued proper performance of the bypass accessory, it should be inspected in accordance with

S&C's recommended schedule and procedures contained in S&C Instruction Sheet 716-590.